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A discussion of the reasons for and against a change in a university calendar—the benefits to be derived, particularly in terms of efficiency of utilization of academic facilities, but also in terms of better learning processes; the possibly deleterious effects; and the problems likely to be encountered. Various possible divisions of the calendar year for academic purposes are discussed with particular emphasis on the new trimester plan at the University of Pittsburgh.

Two case studies are presented—Dartmouth College and the University of Pittsburgh. Includes a bibliography.

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THE UNIVERSITY CALENDAR

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A SERVICE OF THE COMMITTEE ON THE UNIVERSITY CALENDAR
OF THE AMERICAN ASSOCIATION OF COLLEGIATE
REGISTRARS AND ADMISSIONS OFFICERS

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THE UNIVERSITY CALENDAR

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AND ADMISSIONS OFFICERS

1961

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Foreword

ALL WHO share responsibility for the developing programs of higher education will find this report a source of helpful information and suggestion. It does not recommend a best academic calendar or hold that a single standard calendar is feasible. It does bring together a clear and comprehensive summary of factors to be considered in calendar planning. It gives intimate insight into the processes of substantial calendar change occurring recently on two major campuses. There is strong evidence that higher education in the United States is responsive to changing conditions in our society. The critical importance today of this responsiveness becomes increasingly apparent in public awareness and concern.

The American Association of Collegiate Registrars and Admissions Officers is pleased to make this report in a further discharge of its responsibilities. This project, through The Committee on Research and Service by the special Committee on University Calendar is another example of how Association member institutions succeed in exchanging ideas and information. Specifically, it indicates one way in which the Association facilitates these exchanges and discharges its responsibility for creative study and exploration of appropriate problems and challenges which face our colleges and universities.

The American Association of Collegiate Registrars and Admissions Officers is grateful to Warren Wells, his committee members and the many others whose thoughtful work has culminated in this report.

PAUL L. TRUMP

March 13, 1961

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Preface

THE PRODUCTION of this Bulletin has been a project of the Committee on the University Calendar of AACRAO over a period of two years. It is designed to shed a little more light on the mysteries of an academic calendar.

The Committee wishes to express appreciation to Dartmouth College and the University of Pittsburgh for permission to use their experiences as bases for case studies and to the many registrars throughout the country who made this report possible by supplying copies of calendar studies made at their own institutions.

WARREN D. WELLS
Chairman
Committee on the
University Calendar

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CHAPTER I

Introduction

THE WORD debate is closely associated with schools and those in schools love to participate. As all connected with colleges will readily agree, the discussion and change of educational processes and content are vigorously tackled, continuously. The churning about hopefully produces some advances, in spite of instances which seem to be cyclical, and indeed it would appear illogical that methods of higher education could remain static or aloof from the rapid changes going on elsewhere in our economy and society. It is inherent in a service dealing with unique increments in the form of individual students, that there is not agreement among the professionals and that there should not be. However, there are pressures and advantages pushing toward some degree of uniformity, in form at least, among schools.

A university's academic calendar is one of the perennial subjects in this debating and is subject to the same pressures as other academic matters. The desire to tailor it to the particular educational philosophy of the college, which in itself raises conflicts, and the advantages of conforming to the main features of the civil calendar and the general calendar pattern of other schools and colleges make it a worthy subject. A calendar is a definite schedule of dates, but, at least in the case of academic calendars, generally becomes open to more criticism, the more definite it is.

This report will be based on the teaching technique of raising more questions than are answered and so it makes no attempt to define a "best" calendar, nor is an attempt made to produce uniformity in this field, but hopefully it will help anyone engaged in this debate to a greater awareness of the many facets and pitfalls involved in as innocent appearing a document as a calendar. We have attemped to be factual and, where the data is not, to present subjective opinions without bias and not dogmatically. We also hope it is written from the vantage point and not just the viewpoint of the registrar, since he is generally the person in a college most conscious of the calendar and is responsible for the enforcement of its dictates on both faculty and students.

In the past the primary search seems to have been for a calendar that would encourage more effective learning on the part of the stu-

dents and also, of course, be effective for the faculty. From the needs of these two groups stem questions of how long the terms should be and when they should begin, what the course structure should be, what provisions should be made for examinations, vacations or recess periods, housekeeping chores, and athletic schedules. Since no one calendar gives the best answer to all these questions, there is no such thing as a completely satisfactory college calendar and it becomes necessary for each institution to reconsider the question from time to time. Except for brief periods in World War I and World War II, calendar studies have assumed that most students and staff would continue in an academic year of about nine months and hence, any summer session involved would be a subsidiary term.

The case study given in the Appendix on the calendar change at Dartmouth College is an illustration of a change made for pedagogical reasons. This college stated its primary objective as a determined effort to increase the student's responsibility for his own education and to shift the emphasis from teaching to learning. They have adopted a curriculum divided into three terms which involves only three subjects each term. It is pointed out that any such change has repercussions and in this case raises such questions as the difficulty of scheduling sequential subjects which occur in a professional curriculum, and also staff scheduling questions such as whether the professor who has taught his usual number of subjects in the first two terms will have both the third term and the summer off.

Some of the newer calendar studies assume that the college year should be extended to eleven or twelve months. This new assumption is based on one, or both, of two factors. The first is the fact that although college enrollments have grown greatly, the principal growth is still ahead of us and may overwhelm colleges and universities unless all feasible means of coping with it are explored and used. The second is the fact that training has been so extended into the adult years of students, that the student is often in his mid-twenties or even early thirties before he is ready to begin his career and take up his part of the load of the profession. Consequently some think there should be more provision for accelerating the education of students for this reason. The question of how large college enrollment will be in the coming years is impossible to estimate with precision, but one fact is certain. There will be many more people of college age in the years ahead. It does not follow that all present institutions will increase proportionately. Many new institutions are now being established,

particularly two-year institutions, and these will take a significant part of the increased enrollments. However, as the press for funds to finance enlarged facilities and staffs in the present institutions and to establish new ones develops, it is safe to say that all institutions will find it necessary to make sure that their facilities and staffs are used as efficiently and effectively as possible. A year-round calendar is a way of trading time for space and enabling a college to handle more students within the same physical facilities. Since the student increases which higher institutions face will continue in the foreseeable future, any calendar solution arrived at must be one that will work in the long run. Many colleges adopted a year-round academic calendar during World War II as an emergency measure and then dropped it as soon as possible. The major question addressed here is whether the coming enrollment pressure will be sufficiently great to push colleges again into a year-round academic calendar, this time on a longer term basis.

Another reason which has been advanced for a year-round system is that it makes possible and encourages a fuller commitment to the central task of education on the part of both students and staff. The corollary argument maintains that it is not conducive to learning to have disrupting breaks of the length of the usual summer period. On the other hand, others point to the possibility of student fatigue or going stale under the pressure of studying throughout the year.

An indication of the trend toward more use of the whole year for education, is the increase reported in summer session attendance in both high schools and colleges. Dr. Lawrence G. Derthick, Commissioner, United States Office of Education, recently stated that high school after high school across the country today has almost as many pupils in the summer classes as it does in the winter. The increase in demand by regularly enrolled college students for regular credit subjects in summer school is accompanied by no lessening of the demands for special programs, such as service training programs for teachers, institutes, workshops, and seminars, developed to serve those individuals who cannot enroll during the academic year.

A major calendar change affects a great number of people and entails a great deal of work and trouble to effect. It should not be undertaken lightly and should merit very careful consideration by all concerned. Such a change should be undertaken only for strong educational reasons and when it has the enthusiastic support of the faculty. As in most programs, the enthusiasm of those concerned is

one of the main factors in determining success. Thus, if the enthusiasm and morale of those in a college is high, the program will probably be successful under most any set of particular dates. It has been the experience of some colleges which have changed their calendars that the self-imposed and necessary revision of course offerings and subject content was highly beneficial, but it is felt that curriculum reform can be undertaken more directly than by means of the pressure of a calendar change.

It should be pointed out that there are many other ways of attempting to increase the efficiency and capacity of academic programs besides that of changing the calendar. Experiments and studies are currently going on in such areas as increasing the amount of work done by students independent of classroom instruction, increases in class size, use of television and other technological innovations, use of part-time faculty, and increases in classroom utilization.

To provide greater insight into the problems of a calendar change, two case studies of colleges which have recently gone through a major revision are included in the appendices. Their reasons, approach, and troubles provide specific examples of a vivid nature. Although the experiences of a single school are unique to the circumstances of that school, we believe they will be of interest and value to all who are concerned with the possibility of benefits from a calendar modification. The choice of these two colleges was somewhat arbitrary, but hopefully their experiences are typical of other accomplished and comtemplated changes.

Elements of the calendar changes described in the two case studies in this report have also appeared in the calendar revisions proposed by two large universities for 1961-62. The University of Pennsylvania has shifted its calendar so that the first term of 15½ weeks runs from Labor Day to Christmas and its second term of 17½ weeks runs from mid-January to mid-May. Although they will now have two summer session periods of six weeks each, they have prepared the way to introduce a summer term of regular term length when and if they feel that year-round operation is advisable. The Pennsylvania State University will change from a semester calendar to a quarter system with emphasis on year-round operation. The summer term will be made as similar as possible to the other terms in course offerings, and students will be encouraged to attend on a year-round basis. The class period will be changed from 50 minutes to 75 minutes and a student will normally take only three subjects per term.

CHAPTER II

Historical Background

W. H. COWLEY in his calendar report[1] outlines four principal varieties of academic calendars which have been in vogue since the founding of the first American college in 1636. First was a four-term pattern following that of Oxford and Cambridge, which was effective at Harvard University for 165 years. The three-term pattern became the predominant plan of calendar organization during the eighteenth and nineteenth centuries. The popularity of this plan seems best explained by the fact that a large number of college students taught school during the winter months when the children in rural areas could attend. Three factors which seem to have lead to the three-term plan being supplanted by the two-term or semester system were: the decline in number of students teaching during the winter months because of development of academies, normal schools, and high schools, the graduates of which went directly into teaching; the desire to equalize the length of the terms, thrown off-balance under the three-term system (Harvard University, for example, had 12, 13, and 17 week terms); and the influence of German educational thought. The quarter system originated at the University of Chicago in 1892. Great impetus was given to the spread of this plan in 1917 when the Council of National Defense urged dividing the college year into four terms of approximately 12 weeks each "to use most profitably the time of the students and the institutional plant and equipment." The common calendar pattern, in both grade schools and colleges, of nine months of study and the summers off, for both students and teachers, seems to be a custom carried down from the days when students had to help harvest the crops.

In a recent article Grayson Kirk[2] outlined the development of a three-year college calendar pattern. Harvard University started with a three-year course patterned after English colleges, but another year was added in 1642 to compensate for the sketchy quality of colonial preparatory schools. The University of Virginia attempted a three year-plan in 1819, but abandoned it a few years later under pressures

[1] *Study of the Relative Merits of the Quarter and Semester Systems* (Columbus: Ohio State University, 1932), pp. 52.

[2] "College Shouldn't Take Four Years," *The Saturday Evening Post*, Vol. 232, No. 39, March 26, 1960, p. 111.

to conform with other colleges. Dissatisfaction with the hardship the long schedule imposed on working-class families erupted in the 1850's. The universities of Michigan, Minnesota, and Georgia introduced shorter courses, but faculty opposition quickly killed the experiments. The Yale Sheffield Scientific School required only three years of study for a B.S. in engineering from its founding in 1847 until 1920. The three-year program was standard at Johns Hopkins from 1876 to 1907 and at Clark from 1902 to 1922. Within the usual framework, individual students could and are now accelerating their progress toward a degree by taking overloads, examinations for credit and advanced placement, and summer session study. Since its start in 1955, the advanced placement program of CEEB has facilitated getting a jump on the number of college credits for an increasing number of matriculating students.

At the present time the most prevalent academic calendar among American colleges is the semester system. A listing furnished by the Office of Statistical Information and Research of the American Council on Education (see Appendix 3) shows that of 1,058 regionally accredited universities and colleges as of January 1, 1960, 147 or 14 per cent were on a quarter system. Most of the remaining colleges were on the semester system. A similar list as of 1956 shows that of a total of 969 colieges, 168 or 17 per cent were on a quarter system. Their lists also indicate that in this period from 1956 to 1960 twenty-six colleges changed from a quarter to a semester system and two colleges changed from a semester to a quarter system.

The following table from a University of Michigan report shows a similar division between schools following quarter and semester calendars, here broken down by type of school and size of enrollment. There are of course other species of academic calendars, but the broad outlines of semester systems and quarter systems encompass most of the calendar plans currently in use.

FREQUENCY OF SCHOOLS CONSIDERED BY CALENDAR SYSTEM, TYPE, AND ENROLLMENT (1957–58)[3]

System	Semester					Quarter					Total
Type Enrollment	College	University	Teachers	Professional	Total	College	University	Teachers	Professional	Total	
1–549	187	15	7	62	271	28	3	2	15	48	319
550–5049	256	106	27	27	416	47	17	11	10	85	501
5050–10,049	15	37	2	2	56	3	8	0	2	13	69
10,050—	3	25	0	0	28	0	6	0	0	6	34
Totals	461	183	36	91	771	78	34	13	27	152	923

[3] Paul S. Dwyer et al. *Report of the University Calendar Study Committee* (Ann Arbor: University of Michigan, June 1958), p. 69.

CHAPTER III

Types

A. SEMESTER SYSTEM

THE SEMESTER calendar is generally composed of two regular terms of about 15 weeks of classes each, running from late September to early June, plus a summer session which is outside the regular academic pattern. This system is followed by the majority of colleges at the present time, as was pointed out previously, and so can be considered as empirically satisfactory. The University of Michigan Calendar Study[4] in a survey of 76 colleges found the length of a term under this system to be 15 weeks in 40 per cent of the cases and 70 per cent of the semesters were in the range of 14½ to 15½ weeks in length. These lengths of terms refer to the number of weeks in actual classes excluding registration, vacation, examinations, etc. They found that regional accrediting agencies have no specific requirement as to number of weeks of classes per term. However, some professional accrediting agencies do have specific requirements and in some states laws govern the minimum number of classes in education courses. In broad outline the semester system involves a college year starting in late September with three days off at Thanksgiving, about two weeks off as a Christmas vacation, often a week or so between the first and second terms, a spring vacation of one week, often connected with Easter, and ending early in June. One of the principal undesirable features of this type of calendar is the "lame duck" session; the short period (one to three weeks) of classes remaining in the first term after the Christmas vacation.

The summer session is generally outside of the regular academic program and is composed of sessions of varying length, catering to a somewhat different clientele, with a different and usually limited array of course offerings, and taught by only a fraction of the regular staff.

B. QUARTER SYSTEM

The quarter calender is composed of three regular terms per year with about ten weeks per term in instructional time and a school year

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[4] Dwyer, op. cit., pp. 20-22.

of about the same over-all length as under a semester system (typically 37 or 38 weeks), running from late September through early June. The fourth quarter is generally a summer session period outside of the regular program and with a different emphasis. Under this academic calendar the Christmas vacation and spring vacation fall between terms. Generally in this system the student studies four to six subjects concurrently, similar to the programs under the semester system, although in some cases the students are held to three subjects.

The types of academic calendar are defined here primarily by term length and the number of terms per year. This simple a classification is not followed by all. For example, some maintain that a system limiting the student to only three subjects per term of quarter length should not be included under the description of quarter calendars, due to its different curricular construction. However, no simple term has come into common usage, as yet, to describe this particular type of calendar.

Under both the quarter and semester calendars, the most common time for matriculation is September. In those cases where students are admitted at other times of the year, the number is much smaller than in September.

C. TRIMESTER SYSTEM

A type of year-round academic calendar composed of three 15 week terms, including an examination period, if given, is now commonly referred to as the trimester calendar. The trimester calendar is now used by only a few colleges, but has received a great deal of attention lately as more and more colleges have been considering the possibility of year-round operation. One large university, The University of Pittsburgh, has recently changed to this type of calendar and further details of its system are given in a case study later in this report.

The trimester system can be considered as an extension of the regular semester system, and similarly the quarter system may be extended by making the fourth quarter a part of the regular academic program. The four-quarter program, of course, would not offer the same increase in length of the college year as that under the trimester system.

D. IRREGULAR CALENDARS

There is almost no limit to the possible variety of academic calendars, since the academic calendar is quite elastic and may be twisted

in a number of ways to satisfy educational objectives and local preferences. Hybrid systems of terms of different lengths have been used and it should be emphasized that there are a host of variations possible under the general outlines of calendar systems given above. However, large deviations from the common calendar patterns are few in number.

CHAPTER IV

Comparisons

A. SEMESTER VERSUS QUARTER CALENDARS

CALENDAR studies are not new among colleges and most of the previous calendar studies treat this traditional problem of the relative merits of the semester and quarter calendars. Some of these former reports were used as material for this section and they are cited in the bibliography. Again, both of these calendar systems have proved to be empirically satisfactory and both have been used by a great number of colleges. It is also pointed out that there are a great many variations possible under either system. The beginning and ending dates of terms, vacation dates, and schedules of classes may be varied over quite a range and still fit under the broad outlines of one or the other of these types of calendars. As comparisons are drawn, they quickly become subjective and matters of opinion, but such opinions are given where they seem to have been widely held. One general observation is that faculty and students tend to favor the calendar system with which they are most familiar. This is coupled with the general reaction that dissatisfaction with the accomplishments of students under the existing system leads to the hope that there will be improvement under some other.

One of the main features to recommend the use of a quarter plan is the convenient fit or timing of this calendar with conventional vacation periods, since is it generally arranged so that Christmas vacation and spring vacation fall between terms. In the normal semester calendar the Christmas vacation of two weeks occurs near the end of the first term, causing an inconvenient break in that term's study and leading to the so called "lame duck" session of one to three weeks of classes after vacation. Two modifications of the regular semester calendar have been suggested to relieve this difficulty of the Christmas vacation break. The first suggestion is to move both terms earlier in the year, so that the first term would run from Labor Day to the middle of December and the second term from the first of January to the third week in April. The University of California and Stanford followed this type of calendar in the early part of the century. The

second suggestion is to move the terms in the other direction, so that the first term would start in the middle of October and end at the end of the first week in February, the second term running from the third week in February through the first or second week of June. This second suggestion would put a two-week Christmas vacation in the middle of the first term where it is felt that it might be less disturbing than its present location just before the end of the first term. Both of these suggestions also involve shortening the usual length of each term by reducing the time spent for registration and examinations. Some colleges have found it helpful to regularize their spring vacation by having it occur in the middle of the spring term without regard to the date of Easter.

It is argued that under the quarter system courses are covered too rapidly in this short period, thus being detrimental to learning and to contemplative thinking about the subject. On the other hand it is argued that effective learning is favored by student concentration on only three subjects at a time under a quarter system, rather than four to six under a semester system. The number of subjects that a student is allowed to take concurrently and the number of credit hours per subject can of course be varied to a great extent under either system. Dartmouth College recently changed to a modified quarter system primarily to avoid fragmentation of student attention. Dartmouth's experience with this change and the reasons for it are spelled out in a case study later in this report. It is also widely held that the semester is a more favorable period for preparation of term papers and for extended reading in connection with subjects. However, subjects may be extended over more than one quarter or over more than one semester if more continuity is the desired result. There is some opinion that the term of semester length is better for the maturing process and that the longer length of time permits students to become interested in a subject. Others feel that more frequent class meetings under a quarter system favor education and help maintain student interest. It is probably easier to allow time for a reading period at the end of a semester than it is to allow a reading period at the end of each quarter. Some also maintain that it is easier to arrange sequential subject offerings under a semester plan than under a quarter plan. If sequences of subjects are offered in different quarters this may reduce the number of fields that a student may study.

Some claim that there are fewer examination periods per year

under a semester system which is advantageous to students and that there is less time devoted to examinations. This point does not seem to be too valid, since the number of examinations throughout the year may be varied under either system and now varies from subject to subject within any college. Final examinations are also variable, in that some subjects may not have final examinations and the length of time per final examination may be varied. Some maintain that frequent examinations under a quarter system interfere with the calm perusal of the subject matter, while others maintain that more frequent examinations stimulate better student performance. Again, this is a matter of opinion and is probably best left to the instructor rather than attempting to build it into a calendar.

One point which is quite factual in comparing the two systems is that the quarter system involves more time spent in starting up and ending each term and on such items as registration and examinations, which can be considered by some as wasted time as far as the learning process of the student is concerned. From a mechanical or operational point of view, the semester plan is easier and more efficient. All of the standard operations of registration, scheduling of classes, examinations, and the handling of grades and records are done twice a year rather than three times, as it would be in the quarter system. On the part of the administration and particularly the registrar's office, there is a great deal more time, pressure, and work involved in a quarter plan. This increase might be offset to some extent by each student taking fewer subjects per quarter. The faculty would have an increase in load also, as they are involved in advising students for another registration and in another examination and grading period under the quarter plan. The administrative costs, as reflected in such things as another whole set of registration forms and other record forms, would be higher under the quarter plan, but, the main institutional costs, such as faculty salaries and overhead, would be the same under either of these systems.

The quarter system involves more wasted time in such subjects as chemistry laboratories where setting up a laboratory at the start of a term and cleaning it up at the other end are unproductive operations which are multiplied under this system. However, it is maintained that a quarter system requires less class and laboratory space, if the same number of separate subjects of equal credit are offered during the year under both systems. Another way of putting this is that a school,

shifting from a quarter to a semester system and maintaining the same credit and coverage in each subject, would increase class size an average of 50 per cent for those subjects offered every quarter, if the classes were equal in size each quarter.

Other arguments advanced are that under a quarter system the greater frequency of terms permits readier evaluation of student progress and more frequent student counseling. A quarter system allows greater flexibility in planning a course of studies, or at least more changes, since students wishing to change their programs may do so more readily and frequently. On the other hand, the confusion attending the dropping and adding of subjects during the early part of the term is less frequent under the semester system. Articulation with secondary schools, junior colleges and other senior colleges is better under the semester plan, which seems to be a particularly important point in teacher education and evening programs. Arguments are advanced on both sides on which calendar system favors faculty research and leaves of absence. These points seem to depend more on the faculty load and administrative policy within a particular college than on the calendar system prevailing.

The above are some of the more common pros and cons of these two calendar systems and would seem to point to the real comparison being an individual one for each college and a matter of weighing the different goals to determine which takes precedence.

B. YEAR-ROUND CALENDARS

Most proposals for year-round academic calendars are based on the regular semester or quarter systems, having either three semesters per year or four quarters per year. Thus, these calendars inherit some of the same qualities and comparisons mentioned in the previous section.

In considering year-round calendar operation, one of the comparative points that first catches one's attention is the large theoretical increase in student capacity for a college within the same physical facilities. Under a quarter system this would be an increase of 33⅓ per cent, four quarters rather than three, and the trimester plan yields a theoretical increase of 50 per cent in student capacity. The main detraction to this theoretical increase would be that the increase should be figured over the present summer session attendance. Most colleges now have an active summer session program and so this present summer enrollment should be subtracted from the estimated

total enrollment in the proposed regular term during the summer to give the net increase. There is also a serious question as to whether the school week in the summer can be as fully scheduled as in the winter in those schools which now hold late afternoon, evening, and Saturday classes in the winter. Consideration should be given to the need for more air-conditioning in offices, classrooms, and dormitories for full scale summer operation. Operation on a regular program basis throughout the year would also mean foregoing the special summer programs, seminars, conferences, etc., which are important educational services now performed during the summer by many schools.

In analyzing this increase in utilization by means of a year-round calendar, Elmer C. Easton in his report[5] brings out the importance of having more than one entering class per year and having the entering classes of equal size. Setting up an idealized mathematical model of the operation of a college under different calendar systems with uniform assumptions for attrition between terms and classes and assuming a 30 per cent increase in faculty salary under a trimester plan, it was found that the greatest increase in student capacity, the highest efficiency of operation, and the lowest cost resulted from a trimester operation with three entering classes per year, each of the same size. This held true regardless of whether the students were individually accelerated or whether they all went two terms and one off on a staggered basis as long as it was predictable which system the students would follow. In the same analysis was another program in which individual students went two terms and were off one and which had three entrance classes per year, except that twice as many students were admitted in the first term as in the second and third terms. Under this program the increase in capacity and efficiency would be reduced quite a bit and would fall about midway between the present two semester system with one entering class and the three semester system with three equal entering classes per year. Another program, which would allow for year-round trimester operation with students in class two terms and off one term, but with only two equal sized admissions per year, leads to higher cost and lower efficiencies than under the present standard two semester year with one admitted group per year. The analysis of another program in which students are in class continuously during three terms a year and in which

[5] *Year-Around Operation of Colleges* (New Brunswick: Rutgers the State University, Engineering Research Bulletin No. 41, 1958), pp. 38.

students are admitted only once a year indicates some increases in efficiency and lowering of cost over the regular two semester plan, but not as great an improvement as when three classes of equal size are admitted during the year. Analysis of quarter system calendars gives about the same results as under the semester plan, except that in year-round operation the total class time under four quarters is generally less than under three semesters and so would not give as great an increase in capacity, unless the quarters were extended to add up to the same total amount of time per year as under the trimester plan. In summary, this report indicates that to obtain the greatest increase in capacity, the greatest increase in efficiency of facilities and staff, and lowest cost, would mean a trimester calendar with the students going on a uniform basis, either all going at an accelerated rate of three terms per year or all of them going two terms and one off in that sequence, plus having three equal sized entering classes per year. Another aspect of these analyses is the conclusion that, to greatly increase the use of facilities under a trimester or four-quarter system, it would be necessary for a college to require all or some whole classes of its students to attend in the summer term. General opinion now seems to be that such a requirement would be undesirable unless there is no alternative.

As a balance to demands for greater efficiency of operation, a report[6] from the American Council on Education points out that: "Although it can be argued that quality in higher education is worth whatever it may cost, colleges and universities are under no less obligation than other forms of enterprise to operate as efficiently as possible. But educational institutions do not produce standardized products, and it is a mistake to impose common denominators of accounting upon them. . . . Granting the urgency of maximum utilization of educational resources, this consideration should not result in false or misplaced economies which stand in the way of improving education. . . . No one method can assure learning, but experience suggests that some methods are likely to be more effective than others. They may vary with the nature of the educational enterprise or even with fields of knowledge, but, once determined, they should be embraced at all costs. So important is the end in view, both to the individual and to our free society, that true economy dictates the choice of the most effective rather than the least expensive means."

[6] Nathan M. Pusey et al. *The Price of Excellence* (Washington: American Council on Education, Problems and Policies Committee, October 1960), pp. 6.

Another factor bearing on the increase in student capacity within the same facilities is the matter of the number of staff necessary. Since not all of the faculty would or should teach eleven months of the year under a year-round calendar, there would necessarily be an increase in faculty to take care of the increase in student load. The extra staff would need offices and research facilities and with the premises of the same over-all physical facilities, this would mean a reduction in classroom space and a reduction in student capacity during any given term. These factors are not meant to indicate that there is no increase possible under year-round operation, but that the increase in the student capacity would realistically be quite a bit less than the theoretical one-third or one-half figures cited earlier.

vd. experience of Antioch College

From an educational point of view, a year-round calendar such as the trimester calendar offers the students the possibility of a great increase in the rate of education and more early advancement to further education or professional work in industry. Under the trimester plan a student could finish the requirements for a bachelor's degree in two and two-thirds years. Since the trend is toward more students going on for professional training after the bachelor's degree and thus extending their number of years spent on higher education, this possibility of acceleration takes on added significance.

In his recent article, Grayson Kirk[7] states that he believes the strongest recommendation for the trimester plan is that it will promote better student attitudes toward the serious business of acquiring an education. He believes that a student who must concentrate on intellectual challenges forty-five weeks a year to survive rigorous competition is sure to cultivate better study habits in a climate that fosters serious work and so he believes that an accelerated three year course should be mandatory, not optional.

The student who accelerates under a trimester plan would have to meet the same total cost of his education in a shorter period of time, leading to a greater outlay of funds per calendar year while he is going through school. However, it is pointed out that he will graduate into a career job that much sooner and so his income on an overall basis will be higher than if he had spent his summers working, and it will give him an earlier start in his profession. It is timely to mention that the National Defense Education Act, with its provisions for strengthening college loan programs, would help to make it possible

[7] *Op. cit.*, pp. 109-112.

for students to meet the higher cost per year under such a plan. It is also hoped that acceleration would serve as encouragement to more students to go on to professional study, since they would be able to finish sooner. This in turn would provide society with more trained people at an earlier age.

The timing of the terms in a trimester calendar which has received the most general discussion has been from Labor Day to the middle of December for the fall term, from early January to mid-April for the winter term, and from mid-April to the end of July for the summer term. Another proposal which has the feature of articulation in June with other schools would have the spring term run from late February to early June, the summer term from late June to early October, and the fall term from the middle of October to early February.

A year-round academic calendar would bring a number of "time pressures" to bear on various administrative and academic functions. The time spent on orientation and registration would have to be reduced to a minimum and there would be greater need for pre-registration to aid in future planning. There would be advantages in a term of only fifteen weeks under a trimester system and so there would be pressure to reduce the final examination period to a minimum or even eliminate it and along with this perhaps reduce classroom time to some extent. Colleges now concentrate much of their maintenance and reconstruction activities in the summer period when half of the school may be freed for this purpose. Such changes are constantly required by shifts in emphasis in academic and research fields and would be more difficult to carry out if the college is operating fully year-round.

C. IRREGULAR CALENDARS

As stated before, the "normal" semester or quarter calendar may be modified in many ways to accomplish particular educational objectives. To meet the objection of the Christmas vacation occurring near the end of the first semester, the starting date of the semester may be set earlier in the year, so that the vacation period occurs between semesters, or the starting date may be later, so that this vacation occurs in the middle of the semester. The short time period after Christmas vacation may be utilized as a reading or self-study period or a special term of three to five weeks may be made.

One interesting report[8] proposes a calendar of this nature made up of fall and spring terms of fourteen weeks each, including examination periods, separated by a mid-winter term of about five weeks, running from the beginning of January through the first week in February. The main academic innovation in this proposal is that during the five week mid-winter term all of the undergraduates in the college would study together on two common subjects or alternatively all of the students in each class would work on two subjects. They hope for a better utilization of the "lame duck" period than under a semester system and hope for an educational stimulation in this common study period, when students would be introduced to new modes of learning and teaching and given an important kind of variety in the course of a year's studies.

Another possibility would be to have the academic year made up of two and one-half semesters. Under this proposal the first term might run from the beginning of September to Christmas, the second term from the beginning of January to late April and the third half semester from the beginning of May to the end of June. This would offer some acceleration to the student since he would finish in three years and would also meet the objection to the "lame duck" session.

There is the possibility of operating on a one term per year basis with all subjects being year subjects. A different academic emphasis would be involved in the proposal to extend the length of the normal terms to offer increased coverage of subject matter without acceleration by the student towards the degree. Over the years a number of hybrid systems of terms of different lengths have been used.

Deviations from the more customary calendar patterns do cause serious problems of articulation with other schools. Faculty and students also have increased problems in adjusting to terms of different lengths occurring in the same academic year and for the same subject matter. However, the flexibility possible in setting up academic calendars should not be overlooked as an aid to carrying out paramount educational aims.

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[8] Shannon McCune, et al. *The New College Plan* (Amherst: University of Massachusetts, 1958), pp. 55.

CHAPTER V

Planning

CAREFUL planning is vital to the success of a calendar change, since the repercussions are amazingly far reaching in the educational community. The main objectives sought in a change, along with the features to be retained, must be clearly set forth before the specific planning steps can be determined. It should also be recognized that staff time will need to be provided to carry out the planning and implementation of the change. The calendar arangement is quite directly related to the cost of running a college and the relative ease or difficulty of administering it. The costs of dormitory operations, food services, maintenance, and construction are also involved along with the academic budget. To shed some light on planning problems and perhaps prevent some surprises, we offer a partial list of items to be considered.

A. GENERAL CONSIDERATIONS

1. Morale

The academic calendar determines to a major extent the personal schedule of each faculty member with regard to research and study opportunities and his personal life. Also the personal schedules of the students should be recognized with respect to provisions for study, work, vacations, and practice teaching. Particular groups of students such as part-time, cooperative, evening, extension, and non-degree have their own particular time problems. Major changes in an academic calendar will vitally affect the timing of faculty appointments and this must be carefully considered with respect to the cost of instruction and the morale of this group. The current faculty shortage in this country gives added importance to such factors. The relationship of the program of course offerings desired, with respect to faculty appointments, is another intricate problem to be carefully worked out. Most major changes in calendar in the past seem to have been preceded by extensive studies in which the faculty, administration, and the students have participated. As an indication of the importance of this factor, the general rule has been advanced that one way of resolving calendar questions, which seems to hold some prom-

ise, is to follow the time pattern which enjoys the most enthusiastic backing of the faculty and students at the particular college.

2. *Curriculum*

The pedagogical arguments must be defined and resolved. This involves an attempt to set up an optimum time span for teaching a given subject and also involves defining various time periods such as the length of a class period or "hour," the number of class hours per week and per term, and the number of weeks. Unfortunately, this basic question does not lend itself very well to quantitative experiment, although there are strong subjective opinions to be found on every college campus. A year-round academic calendar raises the question of whether or not a student should be allowed or encouraged to study on a year-round basis. Turning the question around, should the calendar be set up to accommodate students at a faster or slower rate than the usual four years for a bachelor's degree? Curriculum considerations also come into play, such as the number of courses a student should complete per term, per year, and in total for a degree. This again involves subjective reasoning on the way in which students can best learn. The value of reading periods and their length are also to be considered in this connection.

3. *Subject Credit*

If the length of the term is changed, the system of credit units may have to be changed from semester hours to quarter units or vice versa. For the sake of uniformity and clarity, it is desirable that colleges do not establish unique types of units, but adapt one of the commonly accepted varieties to their particular circumstances. Any changes in the definition of credit units within a college is widespread in its effect on degree requirements, the relative weight of different courses, tuition and fee schedules, grade point averages, etc. Degree programs may have to be altered and individual subjects and their coverage may have to be changed. Whether particular courses should be offered more than once per year should be considered.

4. *Cost and Effort*

One certainty in any calendar change is that it will involve a great deal of time and effort to effect and that the cost will be high. The high cost is made up of the time of the number of people that must

be assigned to work on the change, the printing of the multitude of revised forms and publications necessary, and the cost of communication and publicity to all interested parties. A careful weighing of the work and cost factors against the possible advantages of a calendar change is a necessary step. More than one proposed change in the past has foundered at this point in its consideration.

5. Final Examination Period

Most colleges have a separate final examination period, which varies in length from one school to another. A year-round type of academic calendar raises the need to reduce the time of this period. The recent parallel experiences of two large universities with this problem are significant. In both cases the final examination period was eliminated and then reinstated a year later at the request of the faculty.

However, there are a number of variables within the examination period which may be modified, such as: the length of each examination, the number of examination periods per day, the number of examination days per week, the average number of examinations per student, whether efforts are made to prevent a student taking more than one examination a day, and to what extent conflicts in examinations are to be minimized or eliminated in the schedule. The availability of examination facilities and proctors also influence the length of the period. Provision should be made for examination during the term when determining the length of a term and the number of hours of instructional time available.

6. Articulation

The advantages and disadvantages of good articulation with other colleges and with secondary schools should be weighed. The quality and quantity of applicants for admission may be affected by the starting date with respect to the starting dates of the colleges and graduation dates of the high schools in the area. It is difficult at this time to get good entering classes in mid year. If there is a school of education, arrangements must be made for practice teaching courses. Adjustments will need to be made in athletic schedules and inter-institutional activities, depending on the types of academic calendar prevailing in the other colleges with which there is much common activity.

7. *Fixed Dates*

Certain dates in an academic calendar are set outside of the usual academic considerations. Holidays, religious and civil, normal vacation periods, and practices of custom and tradition must be allowed for. Urban colleges seem to be bound by customary community observances to a greater extent than colleges in small towns. The vacation schedules for students, faculty, and college personnel may be radically changed in some shifts, such as to a year-round calendar.

8. *Commencement*

The timing of commencement is probably tied in with local college tradition to a greater extent than any other single event in the academic calendar. If the college awards degrees to particular students at the commencement exercises, there must be some time lag, after the close of the term and final examinations, to allow for the checking of students' records and the approval by the faculty of students for the degree. However, it is pointed out, that a number of colleges have found it advisable, for reasons of student attendance, among others, to hold commencement exercises as a ceremony immediately after the close of the term and before the particular students' records have been reviewed. The degrees themselves are then awarded and sent out subsequent to the commencement exercise.

9. *Between Terms*

Most people agree that a break of at least a week should be left between terms. This allows some relief and change in routine for students and faculty and also allows some time for the issuance of grades before the next term.

10. *Special Events*

The timing and frequency of such events as academic convocations, athletic holidays, and the Selective Service College Qualification Test must be taken into account in calendar planning with regard to their effect on the total instructional time available.

B. ADMINISTRATIVE CONSIDERATIONS

1. *Job Analysis*

A major calendar change will bring about changes in work distribution and the timing and nature of many administrative tasks. A

review of staff requirements and job analysis would be of importance in the offices of the director of admissions, registrar, business officer, and academic dean.

2. Registration

New pressures may arise for shortening the time devoted to registration and for instituting pre-registration. The reliability of pre-registration data for planning purposes should be carefully watched. Current experiments using machine data processing techniques hold out new hope to the registrar for improving efficiencies in this area. The timing of orientation periods may also have to be adjusted.

3. Tuition

If the length of term is changed, the whole student fee structure will need revision. This involves room and meal charges as well as tuition fees.

4. Catalogue

An overhaul and re-writing of the college's catalogue may be involved. The time and labor for this task must be allowed.

5. Course Schedule

The intricate problem of setting up a course and room schedule will be complicated, at least temporarily, by a calendar change.

6. New Forms

A multitude of forms used in academic administration, such as registration material, will require revision. Also, a number of public relations pieces on the nature of the calendar change will be needed.

7. Plant Maintenance

Some allowance for the scheduling of plant maintenance and construction must be made in any revised calendar, with respect to both academic building and residence units.

8. Space Utilization

The possible effect of a calendar change on space utilization throughout the college should be investigated. The demands for particular kinds of classrooms or laboratories may be altered.

CHAPTER VI

Summary

AN ACADEMIC CALENDAR is an educational instrument, a means to an end, not the end in itself. A calendar change should be used to help implement educational policy rather than determine it. The semester type calendar is most widely followed by colleges, but there are a number of other varieties of academic calendars which are being used now, and which have been used in the past, with success.

The pressure for increasing college enrollment and the greater number of students going on to graduate study are the new factors leading to a review of the present calendar patterns. A year-round academic calendar holds out the possibility of an increase in student capacity. The extent of the increase depends on the size of the present summer session and whether equal sized entering classes are obtained each term. For this type of calendar to be most effective would require a change in attitude on the part of many people and its adoption by many colleges. Such a condition depends on still greater increases in enrollment pressure.

Careful planning is vital to the success of a calendar change and it should be recognized that such a change will involve a great deal of work and expense. A change should be undertaken only when there is a clear educational advantage to be gained and the goals and purposes should be carefully delineated and kept always in mind.

The committee's study of this problem has not led it to recommend any one academic calendar as best, but only to reaffirm the basic tenet that each college should determine its own educational methods by a weighing of the particular factors within its own frame of reference.

The need for more basic research on the learning process with respect to time and study pressures was also felt.

APPENDIX 1

Case Study: Dartmouth College

EFFECTIVE in the 1958-59 academic year, Dartmouth College changed from a semester calendar to a three-term, three-course program. This change is cited as an example of a calendar change made primarily for educational reasons within the traditional nine month framework. The new calendar plan fits the normal timing of a quarter system with three terms per academic year, but the subjects have the same content as under the previous semester system and students are restricted to only three per term. This feature of subject arrangement does mean an important difference from what is usually described as a quarter system. Their change is typical of the type of rationale and approach that have been used by other colleges in the past, although it is not typical of the particular type of academic calendar change that has been most prevalent in recent years.

The following material consists primarily of excerpts from the article "An Educational Program for Dartmouth" which appeared in the April, 1957 issue of the *Dartmouth Alumni Magazine* and from the *Dartmouth Undergraduate Journal* of November, 1957.

COMMITTEE REPORT

As part of the complete review of Dartmouth life being carried forward under the Trustees Planning Committee, the Committee on Educational Policy and the Sub-Committee on Educational Program Planning, which were joint committees made up of Faculty and Trustees, submitted a report titled "An Educational Program for Dartmouth" to the Faculty in March, 1956. After a year of general faculty discussion and incorporation of suggestions, the proposed program was approved at a faculty meeting on March 5, 1957 and was recommended to the Board of Trustees.

In its report the Committee states that the primary objective is a determined effort to increase the students' responsibility for his own education and to shift the emphasis from teaching to learning. The joint committees realize that this objective can be realized within the framework of almost any curriculum and furthermore that no curriculum can guarantee it. It is unfortunately safer to predict that cer-

tain procedures will diminish self-education than that others will enhance it. The proposals outlined later are based on a belief, arguable, but not demonstrable with Euclidean certainty, that self-education will be helped though not guaranteed. They are intended to set a direction of change, and experience gained in their operation must be the guide to further evolution.

In emphasizing this aspect of the report, the late Donald H. Morrison, then Provost of Dartmouth, brought out the following points with regard to the challenge confronting institutions of higher education at this time. First, the erosion of educational resources by inflation has been great and is continuing. Second, all the indicators point to fewer college teachers relative to the number of students, and fewer first-rate teachers relative to the total number of teachers. Third, since the quality of education depends ultimately upon the quality of teachers, an essential sector of national well-being is at stake.

In most colleges, the emphasis today is on the student's learning what he is taught. This expectation requires no rude break in habits begun in elementary grades and strengthened in secondary school. It fits in well with textbooks, weekly classes and quizzes, hour and final course examinations, required attendance, and other established routines.

Suppose the focus is shifted from teaching to learning, and colleges begin to think of their task as one of enabling students to learn without being taught. If, as is widely believed, the only education worthy of the name is self-education, this concept of teaching is imperative. It could not, of course, become immediately and equally effective for all college students.

In exploring possibilities for extending the creative influence of teaching, curricular organization and teaching methods will need to be reconsidered. But if real progress is to be made, the question of how the student spends his time is at least as important as the question of how the teacher spends his.

Noting the relation between the quality of college teaching and the economic status of teachers, the Committee points out that an increase in the student-teacher ratio could lead to substantial economic gains for the college teacher and, therefore, could lead to long-range improvement of faculty quality. It is important to explore those areas where manpower can be economized without significant educational disadvantage in order to apply this manpower more generously in

areas (such as honors work) where a low student-teacher ratio is imperative.

The joint committees considered such nation-wide factors as the increased pressure for a college education, the consequent need to fully utilize limited educational facilities, and the effect of the shortage of college teachers upon teaching methods and teaching loads. They point out that the three-term, three-course program is readily adaptable to the full use of the college plant during the summer, if year-round operation becomes desirable.

The report comments that persuading a student to learn for himself is almost certainly harder and may be in some cases more time-consuming than teaching him. This introduces a highly speculative element into any comparison of faculty work load under different schemes. The elimination of large required lecture courses from the proposals further weakens the relevance of any argument that faculty compensation might be beneficially affected by proposed changes. The case for the proposals for immediate action is accordingly based solely on their potential contribution to the realization of the primary educational objective indicated above.

The joint committees made (a) proposals for immediate change, and (b) suggestions intended as guides for further evolution.

PROPOSALS FOR IMMEDIATE ACTION

These may be briefly summarized as:

(a) The adoption of a three-term, three-course calendar.
(b) The institution of an independent program of general reading for the first two years and of independent reading prescribed by the major department in the last two years.
(c) The continued exploration of divisional courses.
(d) The modification of the humanities distribution requirement and of the college English requirement.
(e) The modification of the form of the science distribution requirement.
(f) The modification of the college foreign language requirement.
(g) The adjustment of the ROTC programs to the proposed calendar.
(h) The adjustment of the Great Issues course to the proposed calendar.

Except where a specific recommendation for change is made it is to be understood that the continuation of present arrangements is recommended. For example, the degree requirement in physical edu-

cation would be unmodified. It has not been thought necessary to spell out the many changes of form (as distinct from substance) of regulations that must accompany the calendar change.

GUIDEPOSTS FOR SUBSEQUENT CHANGE

In addition to the specific proposals for present faculty action, the joint committees recommended certain areas for exploration and experiment at the departmental and individual level.

(a) The re-examination of courses and major programs by departments.
(b) The increased use of Baker Library and primary sources of information.
(c) The extension of independent projects in the senior year.
(d) The introduction of reading courses for credit.
(e) Continued explorations of the possibility of raising the over-all student-teacher ratio without sacrifice of educational effectiveness.

The first of these proposals for immediate action will now be discussed.

THE THREE-TERM, THREE-COURSE CALENDAR

The three-term, three-course calendar is considered the most satisfactory way of reducing the sub-division of student attention implicit in five simultaneous courses without incurring the drastic reduction in the number of electives implicit in a change to a four-course semester program. The reduction in the number of courses taken simultaneously does not guarantee the introduction of coherent and rigorous projects of independent work but it makes them more feasible by reducing the multiplicity of demands upon the student's time.

The 38-40 class hours available in a term course are not significantly fewer than those available in a semester course at the present time. If it proves feasible to schedule hour examinations at hours additional to those in regular use for other meetings of each course, as recommended by the Division of the Sciences, the difference between the number of class hours in the term and the semester might be dismissed as negligible. However, the total amount of student time available for the individual course during the term is very substantially greater than that available for the individual course during the present semester. There is, therefore, a quantitative as well as a qualitative reason for thinking it will be possible to make the term course more substantial than the present semester course.

It is difficult to assess the validity of the argument that the more gradual assimilation made possible by the greater extension in time of a semester course (plus its intervening—and interrupting—recesses) is a significant educational asset. A canvass of opinion in some seventeen colleges and universities (including several which had changed calendars rather recently) did not encourage the belief that this was an important factor in the balance sheet of experience at these institutions. It is perhaps unnecessary to stress that the joint committees would not advocate a three-term system without a reduction to three of the number of courses carried; most institutions with experience in the term or quarter system have programs of four—or even five—courses, so that the remarkably even balance of their judgments as between semester and term systems is based on a comparison lacking an important feature of the program proposed here.

The adoption of the proposed new calendar reduces by three (from 40 to 37) the number of courses required to fulfill the degree requirement. To offset the consequent reduction in the number of electives available, qualified students are permitted to take three additional courses at the rate of one per year, without additional charge. To qualify for this privilege a student needs a B average for the two terms preceding that in which the extra course is taken.

The proposed change of calendar would clearly require a careful examination of every course in the curriculum by those teaching in it. An important benefit to be derived from the new calendar would be lost unless energy and imagination were used in determining the most fruitful ways of using the increased amount of out-of-class work to raise the maturity of the course and to accelerate the progress of its students toward intellectual self-reliance.

This would also seem to be a convenient time for every department to review its course offerings as a whole and the requirements laid down for any major or majors offered by the department. It would seem appropriate to ask such questions as: Is the major as progressive and intellectually climactic as possible? Do the courses taken in senior year build consciously on those taken earlier? Are the level and the sophistication of such courses appropriate to the increased maturity of the student? Is there an unmistakable difference in intellectual rigor between the elementary, the intermediate and the advanced courses in the department? Is the order in which courses are taken in the department so varied that a progressive quality is

impossible? If so, is this inevitable? Does the department, in fact, specify as prerequisites to the major the courses in its own and other departments that may be essential to a mature approach in the advanced courses of the department?

CALENDAR CONSTRUCTION

On the surface, the problem of arranging four ten-week terms, each followed by a one-week examination period and a two-week recess, seems simple, since these add to fifty-two weeks. But actually this computation ignores athletic holidays including Carnival, ignores Thanksgiving recess, and fails to take into account the need for a longer recess at Christmas to permit scholarship students to take Christmas jobs, and a longer recess at Commencement to permit college facilities to be used by parents of seniors and returning alumni. In addition, such scheduling would place Commencement so late in June as to hamper summer employment of students and proper operation of college facilities during the reunion period, and would push the hypothetical summer term beyond Labor Day. On close study it became evident, however, that with slight reductions in the length of the second and third terms, and more substantial reductions in the lengths of examination periods, the problem could be solved without encroaching on the between-terms vacations which faculty sentiment indicated should be each of at least two weeks duration.

The present examination periods are nine days in length, not so much because this time is essential for spreading out a student's five or six examinations, as because the practice of giving course-wide examinations in all multiple-section courses creates opportunities for conflict which have to be avoided. If all final examinations were scheduled without this practice, no more periods would be required (assuming an adequate supply of examination rooms) than the number of hours at which classes are scheduled, because a student cannot possibly have a conflict of examinations at an hour at which, say, only MWF 10 o'clock classes have their finals, for he cannot possibly be taking two such courses. Careful study of this problem has indicated that an examination period of 3½ days (14 periods of two hours each) will suffice for each of the new terms; to achieve this it will be necessary to abandon the guarantee that a single final examination shall be given in every course, though a course-wide

examination will be possible in freshman English, in elementary language courses, and in some other multiple-section courses. The obvious drawback to the instructor of having additional question papers to prepare would seem to be a fair price to pay for the obvious advantages of an adequate college recess, important both to teachers and to students. Most of the students have one or two examinations per day and the 2 per cent who have three examinations on one day are allowed to make arrangements for conflict examinations on some other day.

It does not seem feasible to schedule "reading periods" or time for preparation for final examinations of substantial length, but every effort will be made to arrange examination periods to follow week-ends or in other ways to provide preparation time free from class engagements. This more restricted reading period may need to be re-examined in the light of future experience with the new curriculum.

SATURDAY CLASSES

The report to the Committee indicated conviction that a suitable weekly schedule could be set up for either a six-day or a five-day week, insofar as that schedule applied to lectures and classes. But there were definite doubts about the possibility of scheduling laboratory periods without use of Saturday mornings, and the problem of the chapel period presented certain difficulties. In addition the Division of the Sciences voted unanimously to request that provision for hour examinations be made outside of class hours, in order not to sacrifice class meetings, which were already reduced in number, particularly in the second and third terms. Since late afternoon and evening hours now used for this purpose are already quite inadequate for the large courses, hope of fulfilling this request depended on finding these hours earlier in the day.

With these technical considerations pointing to the greater adaptability of the six-day week, the Faculty voted for the creation of an *ad hoc* committee to bring in a report on the relative merits of the five-day and six-day weeks.

In the committee other non-technical considerations soon made themselves felt, as representatives of different spheres of college activity reported on their own problems. Among these problems were to be found those faced by certain athletic and extracurricular

activities, which count heavily on practice and rehearsal time early in the week and game and performance time on weekends. These worthwhile activities would be seriously hampered, because participants would often be away on long weekends, and between weekends would be too busy. Friday nights would become undesirable for the scheduling of plays, lectures, concerts, and similar events, with consequent further crowding in earlier parts of the week. In some activities this situation might conceivably spell the end of effective programs, but in any case the character of the College as a residential academic community would be adversely affected.

One consideration which seemed very persuasive was the theory behind the new program, that the education of the student should have greater continuity than in the past, with a timetable less taken up with flitting rapidly from one subject to the next. This theory did not seem consistent with a plan in which it is possible for a student to crowd both his studies and his extracurricular activities into a minimum period, and then to separate himself from the community for a period approximating 40 per cent of the week (40 per cent of 168 hours is equivalent to the period from Friday noon to Monday morning). It was difficult to see how either the studies or the other activities could fail to be adversely affected.

One point was brought out by the Committee on Educational Policy—the danger of introducing an extraneous variable such as the five-day week at the same time as a significant curricular change, thereby making it more difficult to assess the strengths and weaknesses of the new program as they appear.

An admitted weakness of the present schedule is the problem faced by the teacher who finds his Saturday classes more than decimated by absenteeism. Many of the Faculty have found this situation well-nigh insupportable, and have come to the conclusion that the situation must change radically either one way or the other—either by turning to the five-day week or by taking steps to assure better Saturday attendance. Since the committee members were all but unanimous in finding the adoption of the five-day week out of keeping with the educational aims of the college as well as unmanageable, they refused to assume that nothing could be done to improve the possibility of making Saturday classes more effective, and in essence, recommended that Saturday should be regarded as an essential day of the weekly schedule, just as Monday or Wednes-

day or any other weekday is, except of course that Saturday afternoons should be kept free as in the past.

CLASS SCHEDULES

The schedule of classes provides some free or extra hours (labeled "X" periods) for all students, to provide flexibility for the instructor to use. Normally each class meets four times per week and an extra hour is scheduled to supplement the regular course meetings, for examinations, for discussion sections, for optional question periods, and for rescheduling when an instructor must be out of town. The two-hour period from 8 to 10 Monday mornings is used for examinations in the freshman-sophomore General Reading Program, make-up final examinations deferred from the preceding term, and other special events. Some course-wide examinations will still be given in late afternoon and early evening hours, but these must of necessity be very limited in number. The following weekly schedule illustrates some of the points mentioned above.

TIME-TABLE OF RECITATIONS

Fall Term—1960

M	T	W	T	F	S
Special Events	8	8	8X	8	8
	9	9	9X	9	9
10	10X	10	10	Special Events	10
11	GI	11	11	11X	11
12	12	12X	12	12	
1 A	1 B	R O T C Drill	1 A	1 B	
2	2		2	2	

The fact that all morning class sequences include Saturday will contribute to making Saturday classes a more significant part of the college week. This factor of increased protection for weekend classes is a very vital one if present hopes for greater integration of academic and extracurricular activities are to be realized. At the

same time it is clear that these provisions will not have the effect of insuring that all students have Saturday classes. There will still be a considerable number whose election of afternoon classes, and of seminar, conference, and thesis courses, will free them from Saturday morning obligations, and this is as it should be when legitimate educational considerations are involved.

Beginning in 1960 Dartmouth now requires its continuing students to elect courses for a year in advance in May. Entering freshmen and others returning after an absence elect in September for the fall term only, but are asked in November to complete their selections for the other two terms. In November each continuing student receives in the mail a permit, listing the courses already chosen for the winter term; with this permit he may change any of them without charge prior to a specific expiration date. A similar spring term permit is issued in February. This annual pre-election not only stimulates better planning on the part of the student, but permits it on the part of the college. Moreover, faculty time spent in curriculum advising can be concentrated largely in one period each year.

CONCLUSION

It would not be fair to imply that there have been no problems, but there have been no major disappointments, and the progress has been encouraging to date. Statistics on use of books in the library and sale of classic paperbacks at the local bookstores showed an immediate marked improvement on inception of the new program, the faculty admits to being pushed harder by the students, and there is a heightened intellectual atmosphere which could scarcely be coincidence. Continued evaluation of the operation of the new calendar is being carried on, along with planning for future changes.

DARTMOUTH COLLEGE CALENDAR 1960-61

September 24, Saturday. Registration of upperclassmen. (8 A.M.-12 Noon)
September 26, Monday. College year begins.
(10 and 11 A.M. Classes meet at 8 and 9 A.M. respectively.)
Annual Convocation 10:15 A.M.
October 22, Saturday. Athletic holiday begins Friday, 11 A.M.
November 5, Saturday. Athletic holiday begins Friday, 5 P.M.
November 23, Wednesday. Thanksgiving recess begins 12 noon.
November 28, Monday. Thanksgiving recess ends 8 A.M.
December 10, Saturday. First term classes end 12 noon.
December 12-16, Monday-Friday. First term examinations.

CHRISTMAS RECESS

January 2, Monday. Second term registration.
January 3, Tuesday. Second term classes begin 8 A.M.
February 4, Saturday. Carnival holiday begins Friday 11 A.M.
March 11, Saturday. Second term classes end 12 noon.
March 13-16, Monday-Thursday. Second term examinations.

SPRING RECESS

March 29, Wednesday. Third term registration.
March 30, Thursday. Third term classes begin 8 A.M.
May 27, Saturday. Last day of classes for seniors.
May 29-June 2, Monday-Friday. Comprehensive examinations.
June 2, Friday. Third term classes end 5 P.M.
June 3-7, Saturday-Wednesday. Third term examinations.
June 9, Friday. Class Day.
June 11, Sunday. Commencement Day.
June 12-18, Monday-Sunday. Class Reunion Week. Hanover Holiday.

APPENDIX 2

Case Study: University of Pittsburgh

THE UNIVERSITY OF PITTSBURGH is the first major university since World War II to change to a year-round calendar on a large scale. This change from a regular semester system is being followed with great interest by many colleges and this case study is presented to outline some of the reasons for the change and some of the methods used in accomplishing it. The following material consists mainly of a summary report written after the completion of one academic year on the Trimester Calendar at the University of Pittsburgh.

BASIC CONSIDERATIONS

The educated man today must have both a liberal and a professional education to cope with the complexities of our world; he must be ready at an increasingly early age to take his place in society; and he must comprehend an ever-increasing body of knowledge. To accomplish these ends, programs can be expanded, standards can be raised, plant and equipment can be augmented. Time is the only factor which is inelastic. Yet time is of prime concern in realizing these objectives. Since the time available for the education of young people cannot realistically be increased, it must be used as fully as possible. This would imply that it is no longer desirable to allow the student to spend one quarter of the year in activities that do not further his formal education. In adopting the year-round calendar, the University of Pittsburgh hopes to be able to provide every student with the time necessary (1) to acquire more of the constantly increasing body of knowledge in his field; (2) to enable him to enter his life work at the peak of his creativity; and (3) to acquire a liberal-professional education or a graduate degree in a reasonable length of time.

What made the trimester calendar seem to the people at the University of Pittsburgh to be the most feasible approach to year-round operation? Obviously, and of primary importance, it appeared to be the best means of fulfilling the institution's educational objectives.

The first of these objectives was the adequate preparation of the student for the life he must lead in the second half of the twentieth century. Neither a narrow professional education nor a liberal education alone will prepare a student for maximum service to a society which requires of its leaders not only the basic human understandings and values which a liberal education can supply, but also the professional skills which a complex civilization demands. Perhaps the greatest single impediment to a complete liberal-professional education is the length of time such learning requires under the traditional system. The trimester calendar could make the added time available, yet lessen the number of years to be spent in study.

It seemed also that the traditional academic calendar was unrealistic in the light of what physiologists have learned about the age at which human beings mature.[9] It is generally accepted that when physical development is completed, emotional patterns are fairly well set, adjustment to society has been made, and the person is ready to begin living as an independent, adult human being. The age of twenty or twenty-one marks the beginning of a span of ten years or more during which the individual has maximum amounts of strength, energy, enthusiasm, and creativity. It is important for young people to complete their educations and begin their careers as early as possible in this period of greatest value to themselves as individuals and to society.

An acute shortage of specialized manpower in these important age brackets is developing because of the low birth rate just prior to World War II. It will worsen between now and 1965, which means that the nation will need every man-year of professional competence it can get, and at the earliest moment. Our reservoir of needed professional skills would be increased enormously if every student who left our campuses during the next ten years were graduated a year earlier than he would be under the traditional two-semester calendar.

Since the amount of information to be acquired in every field is expanding, there is a constantly increasing quantity of material to be absorbed for effective performance in all areas of living. The acquisition of this knowledge requires even more time, which must be provided in some manner.

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[9] Sidney L. Pressey. *Educational Acceleration: Appraisals and Basic Problems* (Bureau of Educational Research, Ohio State University, 1949), pp. 28-41 + 58-74.

Common to all colleges and universities is the obvious necessity to accommodate the vast numbers of students who will be ready for higher education within the next decade. It has been estimated that the number will increase 100 per cent by 1970. If institutions of higher education continue on the two-semester calendar, present faculties and physical facilities must be doubled within the next ten years. With the trimester calendar, a theoretical increase of 50 per cent in student population (with no increase in staff or facilities) is possible.

It seemed wise, then, to make it possible for students to devote eleven months of the calendar year to study, rather than spending part of the year in stop-gap jobs or in doing nothing. The latter pattern was considered bad for the students and bad for society. Only the problem of finding the best means of extending the school year remained.

CALENDAR INVESTIGATION

In his inaugural address as Chancellor of the University in May 1957, Dr. Edward H. Litchfield called special attention to the problems that would be created by the impending demands for increasing the capacity of colleges and universities for students. He cited year-round operation of institutions of higher learning as a probable necessity in the near future and suggested that a trimester calendar would serve very well for such operation.

Three alternatives were investigated—the quarter system, the two-semester year supplemented by an expanded summer session, and the trimester plan. The trimester calendar was chosen because of some positive merits which it seemed to have and because of some defects inherent in the other two.

The principal shortcoming of both the quarter system and the expanded summer session is that they tend to reinforce the idea that the summer is not really a normal time for study and that, except in unusual circumstances, it should be used for vacation. These calendar plans would be unlikely to change the attitude of students toward year-round study.

The quarter system has four "turn-around" periods between terms each year, and every such period calls for a great amount of administrative work on records, registration, changes in dormitory assignments, and the like. Again, faculty opinion generally regarded

the 12-week quarter as inferior in instructional potential to either the 16-week semester or the 15-week trimester. Finally, the quarter system, with only a week between terms, does not provide a period of sufficient length for the major maintenance of either buildings, equipment, or other facilities that is essential to efficient operation.

The combination of the two 16-week semesters and a 12-week summer session was quickly rejected because the terms are of unequal length and therefore would create almost insurmountable difficulties that would prevent maximum flexibility in the handling of students when, by 1963 or 1964, a full student load would be the rule each term.

The school year of three equal terms has some conspicuous advantages as a mechanism for encouraging students to undertake year-round study. This is especially true when the third term is scheduled to begin about the middle of April. This schedule breaks with the three-month summer vacation pattern more completely than most others. However, an alternative calendar with terms starting in October, February and June was seriously considered, since these beginning dates would correspond better with the usual high school ending dates. Some felt that this would facilitate the admission of new students at the beginning of every trimester, an arrangement which is necessary for the steady flow of students which the maximum operation of a trimester system requires. Since the three terms are of equal length, they can be given equal educational value and importance. The student can take advantage of the third term to complete his education earlier or, if he must work, he has a longer earning period. The professor may teach three terms and thus substantially augment his annual income or, if he chooses to teach only two terms, he has a longer time for research, study, or other professional activity. The three 15-week trimesters would call for only two relatively short "turn-around" periods each year, which would materially reduce administrative problems. The 15-week trimester, of course, would be the equivalent of the 16-week semester if the latter's last week, devoted to final course examinations, were dropped. Finally, the month of free time between the end of the Spring trimester and the beginning of classes in the following Fall trimester would provide good opportunities for major maintenance and also give students and faculty members alike a vacation of reasonable length.

THE FEASIBILITY STUDY

During the spring and summer of 1957, the Chancellor of the University and his principal advisers held two off-campus meetings to review the basic policies to which the University was committed and to set priorities for carrying these programs forward. It became evident at these meetings that the revision of the calendar was of very great importance, since it would provide the framework within which all the other policies would be implemented. As a result, a committee of faculty and administrative officers was appointed to study the feasibility of the three-term calendar. The committee was asked to complete its study and make its report by the spring of 1958.

The Committee on the Trimester Calendar, as it came to be known, began by consulting with faculty leaders from various parts of the campus. As a result of these consultations, a set of assumptions was formulated. Among these were the following: actual dates for each of the three terms, if the calendar were adopted; the decision that all three terms should be of equal academic weight and value in relation both to each other and to the sixteen-week semester then in use; that the participation of both students and faculty in all three terms would be voluntary; that faculty on nine-month appointments would receive 33⅓ per cent additional salary for teaching in all three terms; that courses offered in the third term would always be part of the regular curricula leading to the fulfillment of degree requirements; and that no new calendar would be introduced which did not give promise of maintaining high academic standards throughout the University.

From these assumptions, the Committee moved to the gathering of information and opinions regarding the problems which would be created by the proposed calendar. Every segment of the University community was consulted, not only for the information it could provide, but to insure genuine participation by the faculty, the student body, and the administrative personnel in the deliberations leading to a policy decision of such importance. Questionnaires, personal interviews, and group conferences as well as day-to-day communication provided the Committee with an accurate picture of opinions, attitudes, and problems peculiar to the several areas of the University. As data became available they were analyzed and

evaluated by the Committee and its research staff for their implications for the proposed calendar.

The Committee considered such points as the fear that students electing a full trimester plan and thereby receiving their degrees at an earlier age would be handicapped in obtaining employment because of immaturity. The Committee felt this fear to be groundless and believed that employers would welcome trained recruits in the younger age brackets, especially if they brought a combination of liberal and professional education. The faculty expressed their concerns about a variety of dangers which they felt might be inherent in the trimester proposal, such as the danger that teaching eleven months a year would interfere with research and professional development and that teaching eleven months a year would cause intellectual fatigue, sub-standard teaching, and lowering of academic standards. On another typical problem, the Committee felt that the task of obtaining new students at the beginning of each trimester might be solved, at least in part, by encouraging the early admission of high-quality high school students a few months before they would normally have graduated from high school.

The Committee was of the opinion that the phased transition from the semester to the trimester calendar should be begun as early as possible. Their reason for this was the desire to begin the change-over before the enormous expansion of demand for admission to college would be fully developed. They believed that the University should have elbow-room while carrying out a very complex operation. They also recognized the value of finding the bugs that inevitably would appear in a new system while there was still time to eliminate them before the great press of student enrollment descended.

By early spring, 1958, opinion had been crystallized and the Committee was ready to prepare its report, which was presented to the Chancellor on April 2, 1958. This report recommended the adoption of the trimester calendar as both feasible and desirable if adequate time was taken in preparation for it. On the basis of the report and the supporting data which the Committee had collected, the Chancellor recommended the adoption of the calendar to the Board of Trustees. Their approval was announced on April 28, 1958.

IMPLEMENTATION

In May of that year the administration laid plans for implementing the new calendar. It was decided to introduce the calendar in the fall of 1959, and to use the intervening fifteen months in preparation for the change.

The summer of 1958 was spent in working out a detailed list of tasks which needed to be accomplished in preparation for the conversion to a trimester calendar. These tasks concerned all areas of the University, both academic and non-academic. In addition to identifying the tasks, the Committee assigned priority to each of them and delegated the responsibility for their accomplishment to the various administrative offices and to committees of the faculty. This list of tasks, which came to be known as the Red Book, had the dimensions of a small telephone directory and was the timetable for almost a hundred tasks.

During the 1958-59 school year, the Director of Educational Planning, acting as coordinating supervisor, worked with all parts of the University—administrative officers, faculty, and students—to integrate their activities and keep them informed of progress in all areas. He was able to identify unexpected problems as they arose and to get policy decisions on them from the committee.

Because of the extensive planning that was done and the skill with which the tasks were completed and coordinated, the first trimester began in September, 1959, as a much smoother operation than anyone would have dared predict a year earlier.

THE FIRST YEAR

The progressive changes in the opinions of the faculty and the student body from the first discussions of the proposal until the present have been carefully watched by the Committee. Of course there are always a number of faculty members who oppose new ideas without giving them a hearing. The reactions of these people were predictable. Others had a "wait-and-see" outlook and, as the planning progressed, they were soon persuaded of the merits of the plan. Still others accepted the idea enthusiastically from the first. It is apparent that the faculty must be given time to absorb the idea and to adapt themselves to it if their wholehearted support is to be obtained, as it must if any plan is to succeed.

Students most actively involved in University affairs were in favor of the plan almost from its inception; the students in general, however, accepted it more slowly. This attitude might be explained by the traditional conservatism and conformity of students in general. However, when the decision to adopt the calendar was announced, student acceptance grew, and was exemplified by the enrollment in the third term, which was far larger than the most optimistic prediction.

There was no intent to put the entire institution on a new calendar the first year. This decision resulted from the size of the task and from the desire to hold the financial risks within bounds. The plan was to begin with the freshman and sophomore students in the undergraduate schools the first year, then move in the next two years to the upperclassmen and the graduate and professional students. Obviously, then, not all the schools offered courses during the third trimester the first year. The new calendar, however, was followed by all. A few of the schools had special problems to work out with their accrediting or licensing agencies, including the Schools of Law and Medicine. The major impact of the program was in the School of the Liberal Arts, the Schools of Engineering and Mines, and the first two years of Pharmacy. These three Schools prepared third-term courses for their freshman and sophomore students, and as a result of the demand for them, a limited number of courses for first-term juniors. Also because of student demand, some third-term instruction for upperclassmen and graduate students was offered in Education, Business Administration, and the Academic Disciplines.

Even as late as one week before registration a maximum of three thousand students was expected to enroll for the third trimester. Actually, 5,026 people registered. These included 1,308 full-time undergraduate students, 2,377 part-time undergraduate students, and 1,341 graduate students, of whom 141 were full-time. (Full-time = 12 credits undergraduate and 9 credits graduate.) The total enrollments in the preceding fall and winter terms were 13,802 and 12,643. The third-term registrants, however, carried fewer credits than were carried in the fall and winter terms. In the fall term, the undergraduate credit load averaged 11.4; in the spring term, 8.5. The graduate and professional credit load fell from 5.6 credits in the fall term to 3.8 in the spring. A number of reasons for this

drop suggest themselves, but whether they are the real reasons has not yet been determined. The reduced load could reflect the inadequacy of course offerings for the third term, which was almost inevitable, in view of the unexpectedly large enrollment and the inclusion of upperclassmen and graduate students. The very newness of the program could have made students reluctant to commit themselves completely to the plan, and this cautious acceptance may have reflected itself in the work load they assumed. Also, with tuition charges established on a per credit basis, students might not have been able to afford a full load.

Studies have not substantiated the hypothesis that most of the students enrolling in the third term would be the better students. The freshmen in attendance the third term and those who chose not to attend were compared in terms of their high school quintile ranks and S.A.T. scores. There appeared to be no significant difference in the quality of the students who enrolled and the quality of those who did not. A comparison of the University of Pittsburgh quality point averages of the two groups is in progress and a preliminary analysis of the data indicates that the cumulative QPA of the men attending the third trimester was significantly higher than that of the men not attending. However, between the two groups of women there was no significant difference. Students attending the third trimester did, however, carry heavier credit loads in the fall and winter terms than students who did not. It may be that the better student came to the third trimester but that the measures used to test this hypothesis were not adequate; it may be that the more strongly motivated student came, but not necessarily the student more capable academically. The faculty did report that the students seemed to work harder in their classes during the third term. Another year's experience with the calendar may give more insight into student motivations. A number of other studies are under way to learn the differences, if any, between the students who attended all three terms and those who did not. These studies are in the socio-economic as well as the academic areas.

Another "bad guess" was in regard to student aid. The University had promised aid in whatever amount was necessary to enable students with demonstrable need to attend the third term. This promise was widely publicized and a substantial number of applications was expected. Many applications were indeed received, and many

scholarships were granted. However, not nearly so many students applied for aid as had been expected. It could be that the more affluent students attended the third term, but as yet there is no factual evidence to support this theory.

The intercollegiate athletic program has presented some difficulties in the adoption of the trimester calendar. The most obvious problem is that of eligibility. The regulations of the Eastern College Athletic Conference forbid participation in intercollegiate athletics by a student holding the baccalaureate degree. Since it is possible for a student to obtain his degree in 2⅔ years under the trimester system, the eligibility of a football player or a basketball player is markedly curtailed. Committees of ECAC and NCAA are studying the implications of the problem and a possible solution presented to them by the University. That solution predicates eligibility on the number of years an athlete may participate rather than on the possession of the degree. If such a rule were adopted, an athlete could be attending one of the graduate or professional schools of the University and still be eligible to participate. Until a larger number of schools adopt the trimester, however, this recommendation is unlikely to be accepted. The only solution at this time is for the athlete who wishes to participate in intercollegiate competition for three years on the varsity teams to forego the advantages of three-term-per-year attendance at the University. Thus, since the student will probably choose to participate for three years in varsity athletics (at 7½ months per year), the athletic program itself should not be adversely affected.

The re-evaluations which the new calendar demanded have had far-reaching effects on many aspects of University life. Because of the tightened schedule, the registration procedure was streamlined and a system of pre-registration adopted; pre-registration demanded an efficient advisory system, and consequently a long-needed reform was undertaken. The complete reappraisal of the curriculum with the resulting pruning of courses was one of the really outstanding by-products of the new program.

Some of the lesser problems, though real, were rather easily solved. One was the necessity of providing staff people for the student newspaper during the third term, since appointments had always been predicated on a two-semester school year. Another was the timing of commencement. The alternatives suggested by the calendar were April, at the end of the second term, and August, at

the end of the third term. Since the commencement exercises are held outdoors, the extremes of weather likely at these times indicated that the retention of the June commencement would be the most practical solution to that problem. And so it has proved to be.

There will continue to be standard summer sessions with the shortest being six weeks. Teachers can begin the Spring Trimester by taking evening courses beginning in April and then register later for summer session courses also.

The fact that the second trimester ends in mid-April has been a factor in recruiting new faculty who see the opportunity to have a relatively long period for research and writing. April termination is also beneficial for foreign travel, since European universities are still in session. Faculty who elected to teach the third trimester have augmented their yearly income by one-third and those who did not elect to teach have been paid for teaching seven and one half months at the same salary as they would have received for nine months and now have four and one half months of free time to further their professional objectives. Students who did not elect the third trimester have the same time to use to their advantage. Obviously, this may include an opportunity to work to help defray the costs of their education.

Despite attempts to provide alternate means of evaluating student achievement in courses, the problem of the final examination period is still to be solved. Faculty and student attitudes are currently being explored on the matter.

The financial aspects of the trimester plan were not of primary concern at the outset of the program. It was estimated that the added costs of trimester operation, i.e., teaching salaries, salaries for extra clerks in the registrar's office, etc., would total about ten to fifteen thousand dollars more than would be received from tuition. This situation would seem, at first glance, to represent a loss; but actually, regardless of income, it resulted in more efficient use of plant and administrative personnel. The actual additional income from tuition and fees was $868,000 against added costs of $475,000. This represented a net excess of income over expense of $393,000 which contributed to the reduction of overhead.

The financial returns are not expected to remain at this level as the University continues its year-round operation. They may decline markedly, since the ratio of expense to income is not direct. For example, the addition of one or even five students may represent al-

most no additional overhead, while the addition of twenty could require another classroom, another instructor, and other additional costs. Additional laboratory and office space will be needed for the additional faculty members who will need to be appointed, particularly in the natural sciences, to take care of the expanded staff needs which a trimester calendar entails. These needs will not be as great, however, during the first two or three years of trimester operation as they will become later when the third trimester is equal in size to the other two. The experience of the past year does seem to show clearly, however, that the trimester calendar can be successful financially.

The final answers to some problems will not be evident for a number of years. For example, the product of a trimester system cannot possibly be known until students have experienced all their college years in such a plan. Because the trimester calendar was introduced in an institution undergoing many other changes, it will be difficult, if not impossible, to isolate the results of trimester operation. The University is continuing its evaluation studies and is taking steps to keep other colleges informed of the results.

UNIVERSITY OF PITTSBURGH CALENDAR—1960-61

Fall Trimester		
Registration Completed	3 September	1960
Classes begin	6 September	1960
Classes end	21 December	1960
Winter Trimester		
Registration Completed	4 January	1961
Classes begin	5 January	1961
Classes end	22 April	1961
Spring Trimester		
Registration Completed	24 April	1961
Classes begin	24 April	1961
Classes end	5 August	1961
Summer School		
Registration Completed	24 June	1961
Classes begin	26 June	1961
Classes end	5 August	1961

APPENDIX 3

Colleges Not on a Semester Plan

THE 1960 Edition of *American Universities and Colleges* contains descriptive data on 1,058 universities and colleges, accredited as of January 1, 1960 by the six regional educational associations in the United States. The following compilation was made by the Office of Statistical Information and Research of the American Council on Education.

All institutions are on the semester plan except those listed below. These are on the quarter system except as noted.

Alabama

Athens College
Auburn University
Birmingham-Southern College
Livingston State College
Troy State College

California

The Art Center School[1]
California Institute of Technology
California State Polytechnic College
College of Medical Evangelists[2]
Golden Gate College[3]
Pacific Union College
Stanford University
United States Naval Postgraduate School

Colorado

Adams State College
Colorado State College
Colorado State University
University of Colorado[4]
University of Denver
Western State College

Florida

Rollins College

Georgia

Agnes Scott College
Albany State College
Emory University[5]
Fort Valley State College
Georgia Institute of Technology
Georgia State College for Women
Georgia State College of Business Administration
Georgia Teachers College
LaGrange College
Mercer University
North Georgia College
Oglethorpe University
Savannah State College
Tift College
University of Georgia
Valdosta State College

Illinois

Concordia Teachers College
DePaul University[6]
Eastern Illinois University
Georgia Williams College
Loyola University[7]
Northern Baptist Theological Seminary
Northwestern University[8]
The Principia College
School of the Art Institute of Chicago
Shimer College
Southern Illinois University
University of Chicago

[1] Three semesters per calendar year.
[2] Quarter and semester systems.
[3] Three semesters of 16 weeks each.
[4] Semester system at Boulder: quarter system at Denver.
[5] Semester system in School of Law.
[6] Quarter system in University College and Graduate School.
[7] Quarter system in School of Medicine.
[8] School of Law and Evening Divisions have semester system.

University of Illinois[9]
Western Illinois University

Indiana

Ball State Teachers College
Earlham College
Evansville College
Manchester College

Iowa

Iowa State University of Science and Technology

Kansas

Bethel College

Kentucky

Asbury College
Transylvania College
University of Louisville[10]

Maryland

Goucher College[11]
Johns Hopkins University[12]

Massachusetts

Babson Institute
Northeastern University[13]
Springfield College[14]

Michigan

Ferris Institute
Michigan College of Mining and Technology
Michigan State University
University of Michigan—Dearborn Center

Minnesota

Bemidji State College
Mankato State College
Moorhead State College
St. Cloud State College
University of Minnesota
University of Minnesota—Duluth Campus
Winona State College

Mississippi

Jackson State College
Mississippi Southern College

Missouri

Central Missouri State College
Northeast Missouri State Teachers College
Saint Louis University[15]
Southwest Missouri State College[16]

Montana

Eastern Montana College of Education
Montana State College
Montana State University[17]
Northern Montana College
Western Montana College of Education

New Hampshire

Dartmouth[18]

New Mexico

New Mexico Highlands University

New York

Keuka College
New York University[19]
Rochester Institute of Technology
U. S. Merchant Marine Academy

North Carolina

Agricultural and Technical College
Appalachian State Teachers College
Duke University[20]
East Carolina College
Fayetteville State Teachers College
Western Carolina College
Winston-Salem Teachers College

[9] Semester system at Urbana and Navy Pier campuses; quarter system at Chicago professional campus.
[10] Engineering School has quarter system.
[11] Three terms.
[12] Quarter system in Schools of Medicine and Hygiene.
[13] Modified quarter system in Day Colleges; semester system in Evening Schools.
[14] Three terms.
[15] Trimester system in Parks College of Aeronautical Technology.
[16] Term system with semester hours.
[17] Law School on semeseter system.
[18] Three term system.
[19] Colleges of Medicine and Dentistry on trimester basis.
[20] Quarter system in Schools of Medicine and Nursing.

North Dakota

North Dakota Agricultural College
State Teachers College—Dickinson
State Teachers College—Minot
State Teachers College—Valley City

Ohio

Antioch College
Baldwin-Wallace College
Fenn College[21]
Hiram College[22]
Kent State University
Lake Erie College[23]
Ohio Northern University
The Ohio State University
University of Cincinnati[24]

Oregon

Cascade College
Eastern Oregon College
Oregon College of Education
Oregon State College
Portland State College
Southern Oregon College
University of Oregon

Pennsylvania

Drexel Institute of Technology
Eastern Baptist Theological Seminary
University of Pittsburgh[25]

South Dakota

Black Hills Teachers College
Dakota Wesleyan University
Northern State Teachers College
South Dakota State College of Agriculture and Mechanic Arts

Tennessee

Austin Peay State College
Belmont College
Bethel College
David Lipscomb College
East Tennessee State College
George Peabody College for Teachers
Lincoln Memorail University
Scarritt College for Christian Workers
Tennessee Agricultural and Industrial State University
Tennessee Polytechnic Institute
Tennessee Wesleyan College
University of Tennessee

Utah

Brigham Young University
College of Southern Utah
University of Utah
Utah State University

Vermont

Bennington College[26]

Virginia

Hampden-Sydney College[27]
Medical College of Virginia
Radford College
Virginia Polytechnic Institute

Washington

Central Washington College of Education
Eastern Washington College of Education
Seattle Pacific College
Seattle University
University of Washington
Walla Walla College
Western Washington College of Education

Wisconsin

Institute of Paper Chemistry (Lawrence College)
Wisconsin State College—River Falls

[21] Semester system in Evening Division; Quarter system in Day Division.
[22] Upperclassmen on four 8½ week terms.
[23] Three 11 week terms.
[24] 7 week terms in some colleges.
[25] Trimester system.
[26] Three terms.
[27] Session system.

From 1956 to 1960 the following changes took place:

FROM QUARTER TO SEMESTER SYSTEM:

Alabama

Alabama Agricultural and Mechanical College
Stillman College

Arkansas

Agricultural, Mechanical and Normal College
College of the Ozarks

Connecticut

Teachers College of Connecticut[28]
U. S. Coast Guard Academy

Illinois

Aurora College
Knox College

Indiana

Indiana State Teachers College

Iowa

Iowa State Teachers College
Upper Iowa University

Maryland

St. John's College

Minnesota

College of St. Catherine

Mississippi

Delta State College

Missouri

Southeast Missouri State College

Montana

College of Great Falls
Rocky Mountain College

New Jersey

Rider College

North Carolina

Elon College
North Carolina College at Durham

South Carolina

Allen University

South Dakota

South Dakota School of Mines & Technology[29]

Tennessee

Middle Tennessee State College
Vanderbilt University

Texas

Baylor University

Virginia

Presbyterian School of Christian Education[30]

FROM SEMESTER TO THREE-TERM SYSTEM:

New Hampshire

Dartmouth

Vermont

Bennington

FROM SEMESTER TO TRIMESTER:

Pennsylvania

University of Pittsburgh

THREE-TERM TO SEMESTER:

New York

Sarah Lawrence College

YEAR SYSTEM TO SEMESTER SYSTEM:

Texas

Rice Institute

SEMESTER TO QUARTER SYSTEM:

Georgia

LaGrange College

Indiana

Earlham College

FROM QUARTER SYSTEM TO TERM WITH SEMESTER HOURS:

Missouri

Southwest Missouri State College

[28] Now called Central Connecticut State College.

[29] Beginning Fall 1960.

[30] Formerly called General Assembly's Training School for Lay Workers, Inc.—Semester system beginning Fall 1960.

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The Home State and Migration of American College Students. Fall 1958. *Nelson M. Parkhurst, Co-ordinator of the Study* (1959). $2.00.

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Office Machine Equipment (1959). $1.00.

Analysis and Design of Office Forms (1958). $1.00.

Catalogues Are For Students Too (1958). $1.00.

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To Members of AACRAO:

In the course of its work on the report, *The University Calendar,* your Committee has sensed some need for a continuing effort to keep all of us informed and up to date on academic calendar changes and developments throughout the country. We are asking for your reaction to the possibility of establishing a central clearinghouse for calendar information. Such an agency might issue bulletins periodically on current changes and also be able to supply copies of calendar studies on request.

The Association is prepared to implement this arrangement if your response indicates sufficient interest.

Warren D. Wells
Chairman
Committee on the
University Calendar

To: Warren D. Wells
Massachusetts Institute of Technology
Cambridge, Massachusetts

☐ Yes, I would like the services of a clearinghouse on calendar information and I would be willing to co-operate by supplying data. I am particularly interested in such topics as: ☐ major shifts of calendar type; ☐ year-round calendars; ☐ final exams, length and timing; ☐ registration, length and timing; ☐ vacations; ☐ commencement; ☐ Saturday classes; ☐ summer session; ☐ lame-duck period; ☐ reading period. Other: .....

.....

We operate on a ☐ semester, ☐ quarter, ☐ year-round basis. Our calendar ☐ has, ☐ has not undergone major revision within the last two years. We ☐ do, ☐ do not contemplate a major change in calendar within the next two years.

☐ No, I do not feel that this service by the Association is warranted.

Name .....

College .....

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Manual for Studies of Space Utilization in Colleges and Universities, by John Dale Russell and James Doi (1957). $2.00.

Normative Data on the Utilization of Instructional Space in Colleges and Universities, by James I. Doi and Keith L. Scott (1960). Free with *Manual*.

The University Calendar (1961). $2.00.

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Secondary School-College Co-operation: An Obligation to Youth (1955).

A Glossary of Terms Used by Registrars and Admissions Officers, by Robert E. Mahn (1956).

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